

WHAT IS CLAIMED IS:

1.           A job scheduling management method for managing schedules of jobs allocated to computers connected through a network, comprising the steps of:
  - monitoring an operating state of a computer to which said jobs have been allocated, of said computers;
  - determining if said operating state meets a predetermined condition;
  - if said operating state meets said predetermined condition, detecting the job uncompleted at a timing when said predetermined condition is met, of said jobs allocated to said computer;
  - detecting another computer that is available to execute said detected uncompleted job, of said computers, based on information concerning resources required for executing said detected uncompleted job; and
  - allocating said detected uncompleted job to said detected other computer.
2.           A job scheduling management method as claimed in claim 1, wherein the determination as to if said predetermined condition is met is based on how many times a usage rate of CPU in the computer exceeds a predetermined usage rate.
3.           A job scheduling management method in a management computer for allocating jobs to a plurality of computers connected through a network and managing a

schedule of each of said jobs, comprising the steps of:

managing first information indicating correspondence between said job and said computer to which said job is allocated, second information indicating one or more resources required for executing said job, and third information indicating one or more resources to be used by each of said computers;

monitoring an operating state of each of said computers to which said job is allocated;

determining if said operating state meets a predetermined condition;

detecting an uncompleted job among said jobs allocated to said computers using said first information;

extracting one or more resources required for executing said detected uncompleted job using said second information;

extracting another computer among said plurality of computers that is available to use said extracted resources using said third information; and

allocating said detected uncompleted job to said extracted other computer.

4. A job scheduling management method as claimed in claim 3, wherein when allocating said detected uncompleted job to said extracted other computer, said job and the other jobs having been already allocated to the other computer are rescheduled.

5. A job scheduling management method as claimed

in claim 3, further comprising the steps of:

when allocating said detected uncompleted job to said extracted other computer, detecting an uncompleted job of said jobs having been already allocated to said extracted another computer using said first information;

extracting one or more resources required for executing said detected uncompleted job of said computer using said second information;

extracting further computer that is available to use said extracted resources for said another computer using said third information; and

allocating said detected uncompleted job to said extracted further computer.

6. A job scheduling management method as claimed in claim 3, wherein said management computer allocates one or more jobs to itself.

7. A job scheduling management method as claimed in claim 3, wherein said management computer further manages information indicating correspondence between said job and a time when said job is to be finished and information indicating a time passed in executing said job, if said management computer predicts that said job is not finished in the time when said job is to be finished from the operating state of said computer that executes said job and said time required for executing said job, determining that said predetermined condition is not met, and allocating the uncompleted job of said

jobs allocated to said computer to another computer.

8. A job scheduling management method as claimed in claim 3, wherein when allocating said detected uncompleted job to said extracted other computer, said detected uncompleted job is allocated to a plurality of other computers among said plurality of computers according to one or more resources required for executing said job.

9. A job scheduling management computer for allocating jobs to a plurality of computers connected through a network and managing schedules of said jobs, comprising:

management means for managing information indicating that a first job is allocated to a first one of said computers and a second job is allocated to a second one of said computers;

monitoring means for monitoring an operating state of said first computer; and

rescheduling means for re-allocating said first job allocated to said first computer into said second computer and said second job allocated to said second computer to a third one of said computers with respect to information managed by said management means in accordance with an instruction given from said monitoring means.

10. A job scheduling management program for allocating jobs to a plurality of computers connected through a network and being used by a management

computer for managing schedules of said jobs  
comprising:

a function of managing information for  
indicating correspondence between said job and said  
computer to which said job is allocated, information  
indicating one or more resources required for executing  
said job, and information for indicating one or more  
resources to be used by each of said computers;

a function of monitoring an operating state  
of said computer to which said job is allocated;

a function of determining if said operating  
state meets a predetermined condition;

a function of detecting an uncompleted job of  
said jobs allocated to said computer according to said  
determined result;

a function of extracting one or more  
resources required for executing said detected  
uncompleted job;

a function of extracting another computer  
among said plurality of computers that enables to use  
said extracted resources; and

a function of allocating said detected  
uncompleted job to said extracted other computer.